



What Is Competency-Based Education?

An Updated Definition

WRITTEN BY:

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About *CompetencyWorks*

CompetencyWorks is a project of the Aurora Institute. It is a collaborative initiative dedicated to advancing personalized, competency-based education in the K-12 education system. We are deeply grateful for the leadership and support of our advisory board and the partners who helped to launch *CompetencyWorks*: American Youth Policy Forum, Jobs for the Future, and the National Governors Association. Their vision and creative partnership have been instrumental in the development of *CompetencyWorks*. Most of all, we thank the tremendous educators across the nation who are transforming state policy and district operations, as well as schools willing to open their doors and share their insights.

About the Aurora Institute

The Aurora Institute drives the transformation of education systems and accelerates the advancement of breakthrough policies and practices to ensure high-quality learning for all.



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TABLE OF CONTENTS

INTRODUCTION	02
A NEW DEFINITION OF COMPETENCY-BASED EDUCATION.....	03
BELIEF STATEMENTS	04
FREQUENTLY ASKED QUESTIONS	04
MISCONCEPTIONS ABOUT COMPETENCY-BASED EDUCATION	07
CONCLUSION	07
RESOURCES	08

INTRODUCTION

Competency-based education is being implemented at deeper levels in more schools every year. It is a major shift in school culture, structures, and pedagogy focused on ensuring that all students succeed and addressing the fundamental shortcomings of the traditional model.

The original working definition of competency-based education was developed in 2011 at the National Summit for K-12 Competency-Based Education (Sturgis, Patrick, & Pittenger, 2011).¹ The Summit was hosted by the Aurora Institute (formerly iNACOL) and the Council of Chief State School Officers, with more than 100 education innovators and practitioners attending.

The working definition helped to build the field and create common understandings of key elements in competency-based systems among stakeholders who were working separately and calling similar reforms by different names—competency-based, mastery-based, proficiency-based, and performance-based education. It has been used by schools as a basis for design and implementation, by states to establish supporting policies and a common vision, and by national organizations to provide frameworks for networks of states to discuss their initiatives.

Eight years after creating the original working definition, feedback from across the field indicates that it should be updated to reflect a deeper understanding of key issues and developments in the field. This report presents the new definition, which was developed with extensive input from invited attendees at the second National Summit on K-12 Competency-Based Education in 2017 and from a technical advisory group of more than 40 experts and leaders in the field.

The report also includes a set of belief statements, answers to frequently asked questions, and a brief discussion of common misconceptions about competency-based education. These provide essential context for understanding the definition and the field in which it is situated. Finally, resources are provided for further exploration of competency-based education policies and practices.

A NEW DEFINITION OF COMPETENCY-BASED EDUCATION

The field of K-12 competency-based education is expanding, and knowledge is growing. From 2017 to 2019, CompetencyWorks engaged in a multi-stage, participatory process to update the 2011 working definition.

The revised 2019 definition of competency-based education is:

1. Students are empowered daily to make important decisions about their learning experiences, how they will create and apply knowledge, and how they will demonstrate their learning.
2. Assessment is a meaningful, positive, and empowering learning experience for students that yields timely, relevant, and actionable evidence.
3. Students receive timely, differentiated support based on their individual learning needs.
4. Students progress based on evidence of mastery, not seat time.
5. Students learn actively using different pathways and varied pacing.
6. Strategies to ensure equity for all students are embedded in the culture, structure, and pedagogy of schools and education systems.
7. Rigorous, common expectations for learning (knowledge, skills, and dispositions) are explicit, transparent, measurable, and transferable.

A competency-based school or district should implement all seven elements of the definition. Strong implementation also requires policies, pedagogy, structures, and culture that support every student in developing essential knowledge, skills, and dispositions.

ORIGINAL AND REVISED DEFINITIONS OF COMPETENCY-BASED EDUCATION

Original Definition of Competency-Based Education (2011)¹

1. Students advance upon demonstrated mastery.
2. Competencies include explicit, measurable, transferable learning objectives that empower students.
3. Assessment is meaningful and a positive learning experience for students.
4. Students receive timely, differentiated support based on their individual learning needs.
5. Learning outcomes emphasize competencies that include application and creation of knowledge, along with the development of important skills and dispositions.

¹Sturgis, Patrick, & Pittenger, 2011

Revised Definition of Competency-Based Education (2019)

1. Students are empowered daily to make important decisions about their learning experiences, how they will create and apply knowledge, and how they will demonstrate their learning.
2. Assessment is a meaningful, positive, and empowering learning experience for students that yields timely, relevant, and actionable evidence.
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2011

2019

BELIEF STATEMENTS

Practitioners and policymakers need a concise definition of competency-based education to enable clear communication and inform action. Realizing the promise of competency-based education systems also requires examining a more extensive set of essential beliefs. The following belief statements complement and contextualize what we mean by the definition of competency-based education.

We believe:

- Competency-based education is a replacement of the systems, structures, and pedagogies of the traditional system.
- Competency-based education is driven by the equity-seeking need to transform our educational system so all students can and will learn through full engagement and support and through authentic, rigorous learning experiences inside and outside the classroom.
- Equity is a central goal of advancing competency-based education systems.
- Communities that aspire to achieve equity must work toward implementing all elements of a competency-based education system.
- All students can learn and must be challenged, believed in, and supported to achieve deep learning aligned with common, high expectations across the education system.
- Educators need to organize innovative learning environments around the needs of students who learn in different ways and in different time frames.
- Students need to learn academic knowledge and the skills and dispositions to apply it (such as growth mindset, self-regulation, social-emotional learning, and habits of success).
- Learning happens anytime and anywhere.
- Deeper learning is collaborative and socially embedded.
- Transparency of learning expectations and assessment results is essential for creating a culture of learning and accountability.

FREQUENTLY ASKED QUESTIONS

This section explains terms and concepts from the definition of competency-based education and the accompanying belief statements.

What do we mean by “equity”?

The National Equity Project states, “Educational equity means that each child receives what he or she needs to develop to his or her full academic and social potential. Working toward equity involves:

- Ensuring equally high outcomes for all participants in our educational system;
- Removing the predictability of success or failure that currently correlates with any social or cultural factor;
- Interrupting inequitable practices, examining biases, and creating inclusive multicultural school environments for adults and children; and
- Discovering and cultivating the unique gifts, talents, and interests that every human possesses.”²

The Great Schools Partnership states, “Educational equity means ensuring just outcomes for each student, raising marginalized voices, and challenging the imbalance of power and privilege.”³

What do we mean by “assessment is meaningful” for students?

Meaningful assessment includes formative feedback that is useful, growth-oriented, and actionable. Educators use data from formative assessments and student feedback in real time to differentiate instruction and provide robust supports so that every student makes progress toward graduation. Formative assessments are balanced by summative assessments that provide multiple opportunities for students to advance by demonstrating what they know and are able to do. Diverse forms of evidence that encourage student voice are embraced.

Multiple measures include opportunities for authentic, performance-based assessment, allowing students to engage in project-based, community-based, and workplace-based learning that is aligned with required competencies and higher-order skills. Assessments are available at or near the point that students have demonstrated proficiency, and determinations of proficiency are consistent across students. Students have the opportunity to submit evidence of learning based on where they are on their learner continuum, with learning targets they can reach based on their current zone of proximal development.

What do we mean by “different pathways”?

In competency-based schools, student pathways are personalized, reflecting each student’s unique needs, strengths, interests, goals, and pace. The order in which students master learning targets both within and across academic disciplines may vary. Rather than coupling the standards with specific ages or grade levels, they are based on learning progressions that provide guidance to students within their zone of proximal development. Personalized learning experiences may include formal and informal learning opportunities both within and outside schools. Varied pathways (and pacing) should not be mistaken for the inequitable, traditional practice of tracking. Competency-based education meets students where they are to ensure that each student can attain the same high standards.

What do we mean by “varied pacing”?

In competency-based schools, pacing is no longer uniform. The primary goal is deeper learning, not faster learning. Varied pacing can mean that students who are proficient in certain standards are encouraged to engage in ways that lead to greater depth of knowledge and multiple ways of demonstrating competency. Varied pacing does not imply that there is a single learning pathway that students simply navigate at different speeds. Each student’s pace of progress matters, with schools actively monitoring progress and providing more instruction and support if students are not on a trajectory to graduate by age 18 or soon after.

What do we mean by “transferable”?

Transferable skills such as critical thinking, problem-solving, creativity, and collaboration enable people to perform effectively in different settings and apply knowledge and skills to different tasks. Transferable skills are also referred to as essential skills and dispositions, personal success skills, higher-order skills, soft skills, noncognitive skills, and 21st-century skills. An essential purpose of schooling is to have students develop skills and deep understandings that they can apply or “transfer” to other academic content areas and interdisciplinary work, as well as to new and unfamiliar contexts beyond the classroom. In addition, there are “transferable” knowledge and skills that are used in learning within and across content areas. Transferable knowledge is a product of deeper learning, “including content knowledge in a domain and knowledge of how, why, and when to apply this knowledge to answer questions and solve problems” (Pellegrino & Hilton, 2012).⁴

What do we mean by “evidence of mastery”?

Students have provided evidence of mastery when assessments demonstrate the application and transfer of essential knowledge and skills. Some schools and districts also assess mastery of transferable skills, which are also referred to as “essential skills and dispositions”⁵ and several other terms (see previous FAQ). Evidence may be derived from a variety of types of assessments that enable students to demonstrate what they know and are able to do.

How are competency-based education and personalized learning related?

The Aurora Institute defines personalized learning as “tailoring learning for each student’s strengths, needs, and interests—including enabling student voice and choice in what, how, when, and where they learn—to provide flexibility and supports to ensure mastery of the highest standards possible.”⁶ In schools using personalized learning, students are active learners with choice in how they learn, voice to co-create learning experiences, options to personalize their pathways, and opportunities to shape their own environment. Having choice in what they learn can co-exist with having rigorous, common expectations for learning because some competencies can be demonstrated via a range of content, and students may choose to exceed required levels of competency.

Competency-based education systems provide structures that increase the effectiveness of personalized learning, such as validation of proficiency based on student work, careful monitoring of pace and progress, and an intentional focus on equity to ensure all students reach the same high standards. These competency-based structures form the foundation of equity for all students, with an expectation for demonstrating mastery through evidence. They also ensure that personalization does not reinforce traditional, inequitable structures such as tracking.

What do students experience in a competency-based school?

Below are examples of experiences that every student should have in a well-developed personalized, competency-based system.

1. I am fully supported in developing academic knowledge and skills, the ability to apply what I have learned to solve real-world problems, and the capacities I need to become an independent and lifelong learner.
2. I feel safe and am willing to put forward my best effort to take on challenging knowledge and skills because I have a deep sense of belonging; feel that my culture, the culture of my community and my voice is valued; and see on a daily basis that everyone in the school is committed to my learning.
3. I have the opportunity and support to learn the skills that allow me to take responsibility for my learning and exercise independence.
4. I have access to and full comprehension of learning targets and expectations of what proficiency means.
5. I have the opportunity to learn anytime, anywhere, with flexibility to take more time when I need it to fully master or go deeper and to pursue ways of learning and demonstrating my learning that are relevant to my interest and future.
6. I am able to own my education by learning in ways that are effective for me with the support that allows me to be successful.
7. I receive timely feedback, instruction, and support based on where I am on my learning progression and my social-emotional development to make necessary progress on my personalized pathway to graduation.
8. My learning is measured by progress on learning targets rather than level of participation, effort, or time in the classroom.
9. Grades or scoring provide feedback to help me know what I need to do to improve my learning process and reach my learning goals.
10. I can advance to the next level or go deeper into topics that interest me as soon as I submit evidence of learning that demonstrates my proficiency.

MISCONCEPTIONS ABOUT COMPETENCY-BASED EDUCATION

As the definition is updated, it is important to address common misconceptions that may compromise the quality and scaling of competency-based education. Foremost among these is that competency-based education is nothing more than flexible pacing, or students advancing at their own pace as they are able to demonstrate mastery. Flexible pacing is one element of the instructional model, but a competency-based education system has many other elements. In some settings, this mistaken belief has led to a checklist mentality in which students rush through low-challenge, disconnected activities and assessments that are seen as fulfilling a list of academic standards. Competency-based education, in contrast, emphasizes deeper, contextualized, and interconnected learning and diverse assessments that include performance-based demonstrations of mastery.

Adaptive educational software that enables flexible pacing but minimizes the role and richness of the teacher and the classroom environment has also been incorrectly equated with competency-based learning. Technology products play important roles in many high-quality competency-based schools, but they are only one part of a comprehensive set of cultural, pedagogical, and structural changes that collectively comprise a competency-based school. Teachers and other school staff use technology as one of many tools to support student learning. Stakeholders who are rightly concerned about overreliance on educational technology have unfortunately used this misconception to criticize competency-based education.

A school is not competency-based simply because students are using adaptive software, have flexible pacing, or are otherwise implementing isolated aspects of competency-based education. Distortions of competency-based education develop when only one aspect of the traditional model is changed, such as pace or grades. In fact, competency-based education is a deep redesign of the culture and structure of school systems to support effective instruction and learning.

CONCLUSION

Preparing all students for success in the modern world requires moving away from the traditional model of education to one that ensures equity and promotes deep student engagement and learning. Competency-based education is designed to meet this challenge, and its implementation is growing rapidly. The revised definition of competency-based education will help build the field by providing a common understanding of key elements of competency-based systems. The accompanying belief statements, FAQs, and resources will support the design and implementation of the effective, high-quality systems that are needed to ensure success for every student.

RESOURCES

The definition of competency-based education provides a common reference for diverse stakeholders to design, implement, and support competency-based schools. Developing advanced competency-based systems requires years of planning, implementation, reflection, and redesign—ideally with the support of strong professional learning organizations. Fortunately, leaders in the field have developed a wealth of resources to inform practitioners and policymakers who are engaged in this work.

Competency-Based Education

Achieve – [The Role of Learning Progressions in Competency-Based Pathways](#)

Colby, Rose – [Competency-Based Education: A New Architecture for K-12 Schooling](#)

CompetencyWorks – [Quality Principles for Competency-Based Education](#)

CompetencyWorks – [Designing for Equity: Leveraging Competency-Based Education to Ensure All Students Succeed](#)

CompetencyWorks – [Levers and Logic Models: A Framework to Guide Research and Design of High-Quality Competency-Based Education Systems](#)

CompetencyWorks – [Meeting Students Where They Are](#)

CompetencyWorks – [Moving Toward Mastery: Growing, Developing and Sustaining Educators for Competency-Based Education](#)

CompetencyWorks – [Implementing Competency Education in K-12 Systems: Insights from Local Leaders](#)

Great Schools Partnership – [Proficiency-Based Learning](#)

Great Schools Partnership – [Research Evidence for Proficiency-Based Learning](#)

Jobs for the Future – [Equity in Competency Education: Realizing the Potential, Overcoming the Obstacles](#)

Jobs for the Future – [The Past and the Promise: Today's Competency Education Movement](#)

OECD – [Equity and Quality in Education: Supporting Disadvantaged Students and Schools](#)

Springpoint – [Designing New School Models: A Practical Guide](#)

Personalized Learning

Aurora Institute – [What's Possible with Personalized Learning? An Overview of Personalized Learning for Schools, Families & Communities](#)

Aurora Institute – [A National Landscape Scan of Personalized Learning in K-12 Education in the United States](#)

Aurora Institute – [Student-Centered Learning: Functional Requirements for Integrated Systems to Optimize Learning](#)

KnowledgeWorks – [The Shifting Paradigm of Teaching: Personalized Learning According to Teachers](#)

LEAP Innovations and Afton Partners – [Sustaining Innovation and Preparing for Scale: Financial Sustainability Research & Analysis of Personalized Learning School Models](#)

Next Generation Learning Challenges – [Introduction and Overview of the MyWays Student Success Series](#)

RAND Corporation – [Continued Progress: Promising Evidence on Personalized Learning](#)

Rubin, Shawn and Cathy Sanford – [Pathways to Personalization: A Framework for School Change](#)

State and Federal Policy to Support Personalized, Competency-Based Education

American Institutes for Research – [Lifelong Learning Skills for College and Career Readiness: Considerations for Education Policy](#)

Aurora Institute – [Current to Future State: Issues and Action Steps for State Policy to Support Personalized, Competency-Based Learning](#)

Aurora Institute – [Fit for Purpose: Taking the Long View on Systems Change and Policy to Support Competency Education](#)

Aurora Institute – [Meeting The Every Student Succeeds Act's Promise: State Policy to Support Personalized Learning](#)

Aurora Institute – [2019 Federal Policy Priorities](#)

Aurora Institute – [2019 State Policy Priorities](#)

Aurora Institute – [Promising State Policies for Personalized Learning](#)

KnowledgeWorks – [A State Policy Framework for Scaling Personalized Learning](#)

KnowledgeWorks – [A Visioning Toolkit for Better Assessments](#)

National Conference of State Legislatures – [No Time to Lose: How to Build a World-Class Education System State by State](#)

ENDNOTES

1. Sturgis, C., Patrick, S., & Pittenger, P. (2011). It's not a matter of time: Highlights from the 2011 Competency-Based Learning Summit. Retrieved from https://www.inacol.org/wp-content/uploads/2015/02/iNACOL_Its_Not_A_Matter_of_Time_full_report.pdf
2. National Equity Project. *Why equity?* Retrieved from <https://nationalequityproject.org/about/equity>
3. Great Schools Partnership. *Our definition of educational equity.* Retrieved from <https://www.greatschoolspartnership.org/about/about-gsp/9>
4. Pellegrino, J. W., & Hilton, M. L. (Eds.). (2012). *Education for life and work: Developing transferable knowledge and skills in the 21st century.* Washington, DC: National Academies Press. Retrieved from https://hewlett.org/wp-content/uploads/2016/08/Education_for_Life_and_Work.pdf
5. Lench, S., Fukuda, E., & Anderson, R. (2015). *Essential skills and dispositions: Developmental frameworks for collaboration, communication, creativity, and self-direction.* Lexington, KY: Center for Innovation in Education at the University of Kentucky. Retrieved from <https://www.inflexion.org/essential-skills-and-dispositions-development-frameworks/>
6. Gross, B., Tuchman, S., & Patrick, S. (2018). *A national landscape scan of personalized learning in K-12 education in the United States.* Vienna, VA: iNACOL. Retrieved from https://www.inacol.org/wp-content/uploads/2018/06/iNACOL_ANationalLandscapeScanOfPersonalizedLearning.pdf

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Eliot Levine is the Aurora Institute's Research Director and leads *CompetencyWorks*. He has managed state-level evaluations of educational programs and conducted in-depth research on local initiatives at the University of Massachusetts, Harvard University, and the University of Maryland. His work has been disseminated in academic and trade journals, edited books, policy reports, and briefs for educators and administrators. His book about the Met School in Providence was named a "Best Book for High School Reform" by the Gates Foundation and published in three languages.

Levine was a teacher for seven years at innovative, student-centered public high schools in the Big Picture Learning and Expeditionary Learning reform networks. He holds a Ph.D. in clinical and community psychology from the University of Maryland and a bachelor's degree in electrical engineering and psychology from the Massachusetts Institute of Technology.

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Susan Patrick is the President and CEO of the Aurora Institute and Co-Founder of *CompetencyWorks*, providing policy advocacy, publishing research, developing quality standards, and driving the transformation to personalized, competency-based education forward.

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